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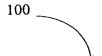
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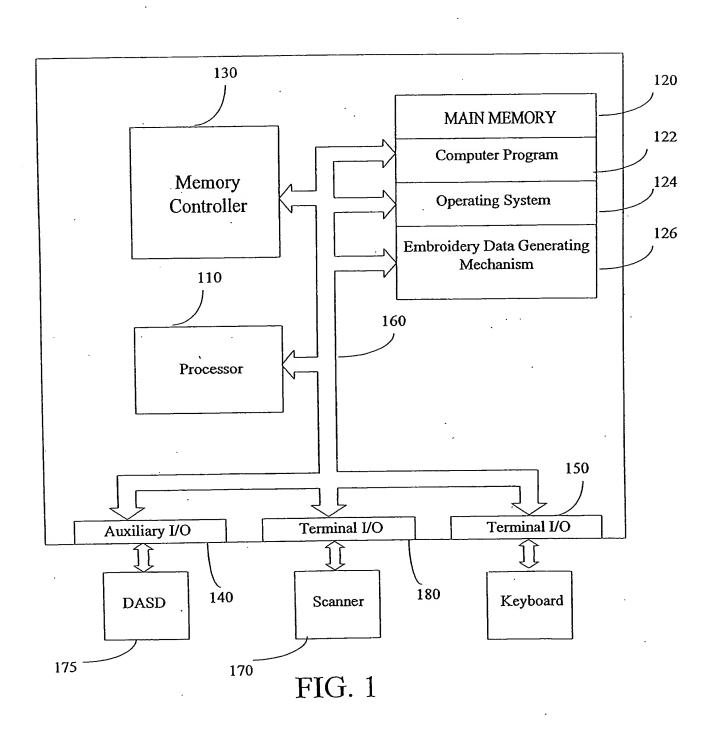
Title: "Automatically Generating Embroidery Designs From a Scanned Image" Inventor: David A. Goldman Attorney Docket: 20

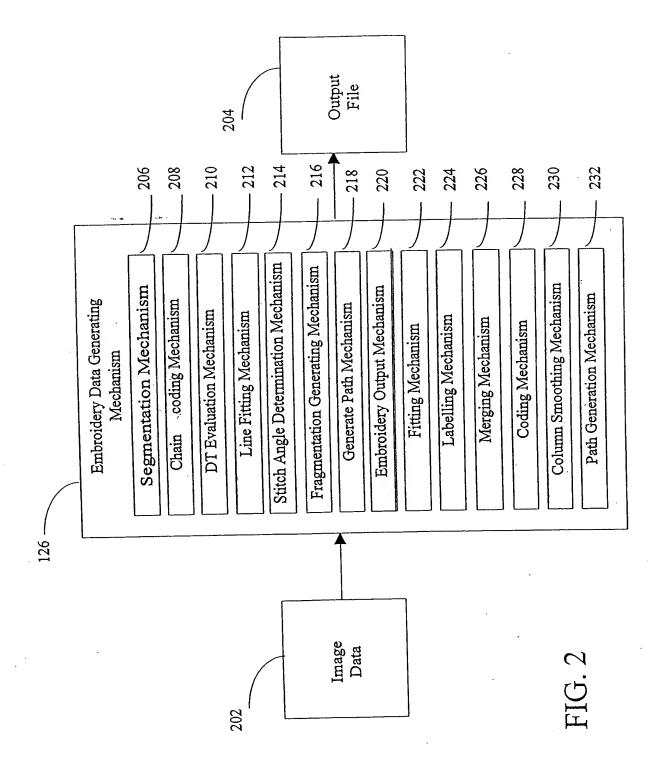
Grossman & Flight, LLC FIG. 1

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Title: "Automatically Generating Embroidery Designs
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Inventor: David A. Goldman
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FIG. 3

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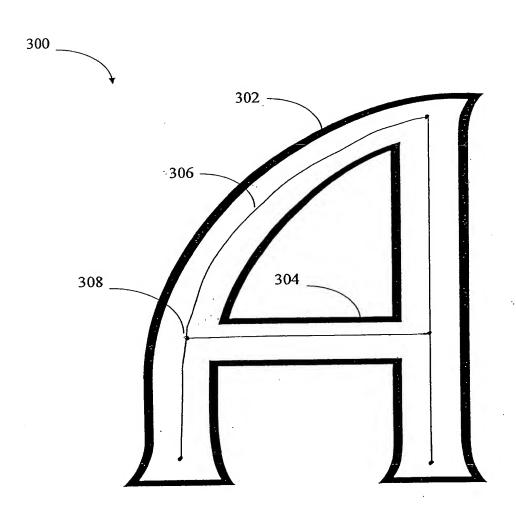


FIG. 3

From a Scanned Image" Inventor: David A. Goldman Attorney Docket: 20060/10001A Grossman & Flight, LLC Tel. 312.580.1020 FIG. 4 Page 4 of 16 400_ 402 Read Embroidery Data Segment Data into 404 Objects 406 Chain-code objects FIG. 4 408 Classify object as thick or thin 410 422 Line detect edge contours Is object thick? and skeleton contours Ν 424 YES Label contour points into 412 categories Line detect contours Simplification and 426 interpretation of 414 interfering columns or Choose scan angle strokes 428 416 Evaluate singular regions Generate fragments using surrounding regularities 418 430 Determine order to sew Remove discontinuity fragments among consecutive stroke normals

420

Create embroidery output

file

432

Generate satin stitch

control points

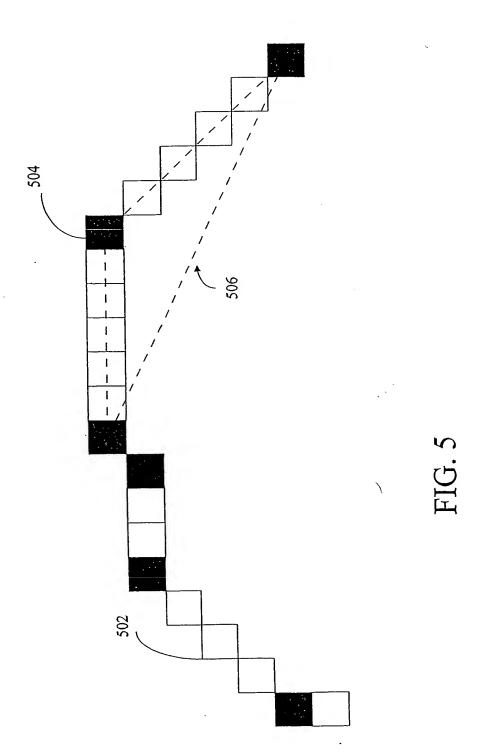
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FIG. 5

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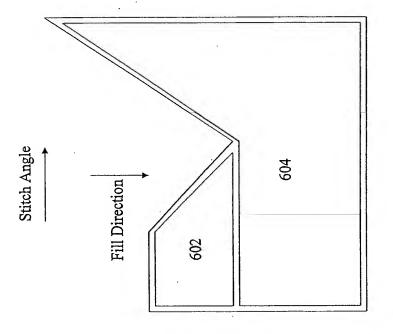
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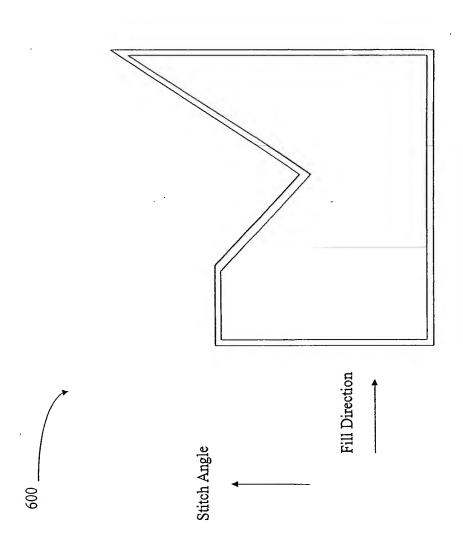
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FIG. 6a

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Title: "Automatically Generating Embroidery Designs From a Scanned Image" Inventor: David A. Goldman Grossman & Flight, LLC FIG. 7

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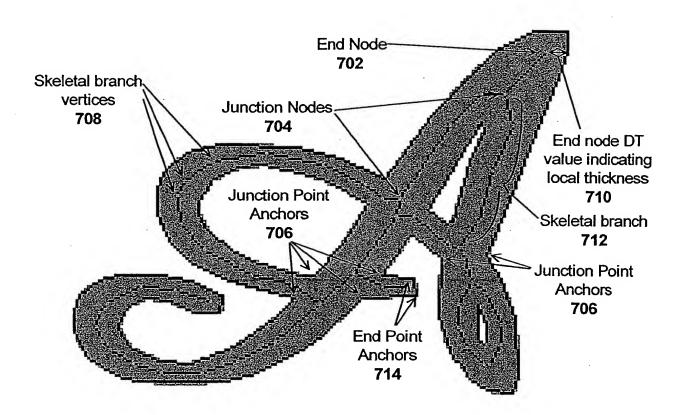


FIG. 7.

Title: "Automatically Generating Embroidery Designs From a Scanned Image" Inventor: David A. Goldman Attorney Docket: 20 Grossman & Flight, LLC FIG. 8

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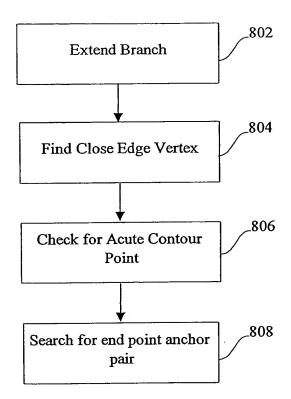


FIG. 8

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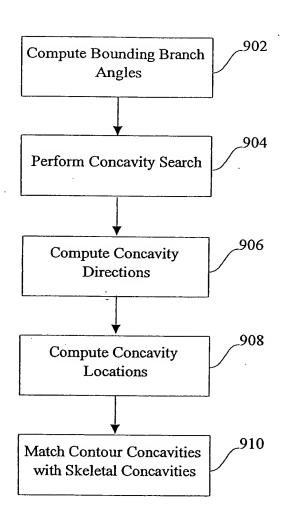


FIG. 9

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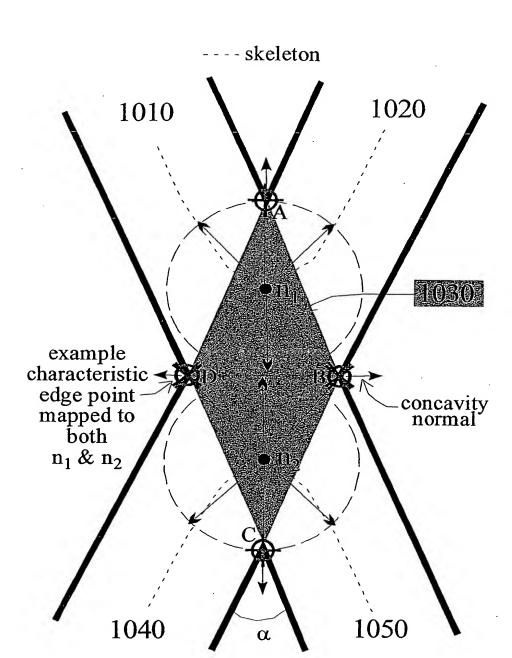


FIG. 10.

Title: "Automatically Generating Embroidery Designs From a Scanned Image"

Inventor: David A. Goldman Grossman & Flight, LLC FIG. 11

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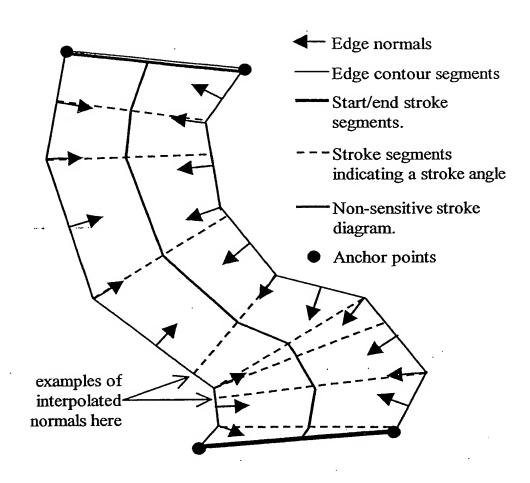


FIG. 11.

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FIGS. 12a, 12b, 13

A D D C C

FIG. 12a.

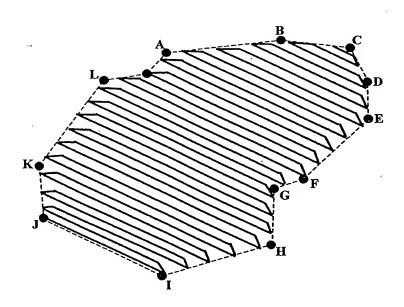


FIG. 12b.

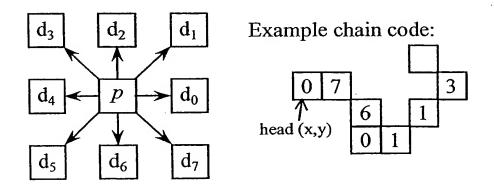


FIG. 13.

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FIGS. 14a, 14b

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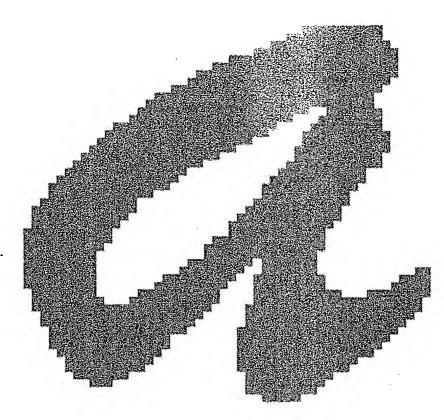


FIG. 14a.

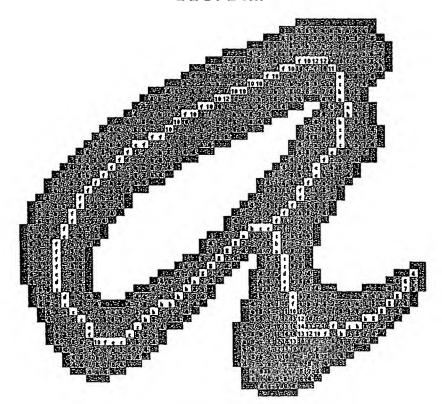


FIG. 14b.

Title: "Automatically Generating Embroidery Designs

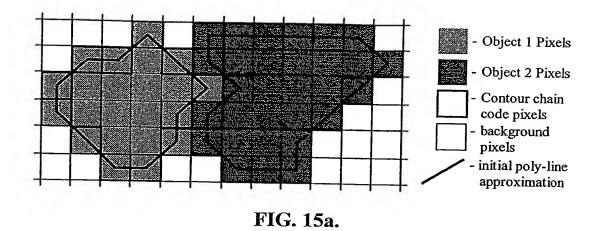
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Inventor: David A. Goldman

Grossman & Flight, LLC Tel. 312.580.1020 FIGS. 15a, 15b

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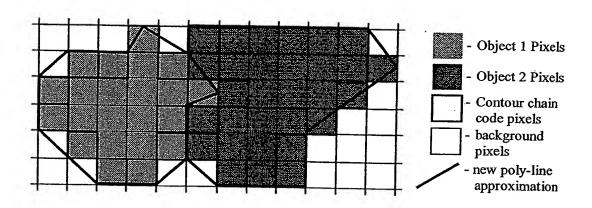


FIG. 15b.

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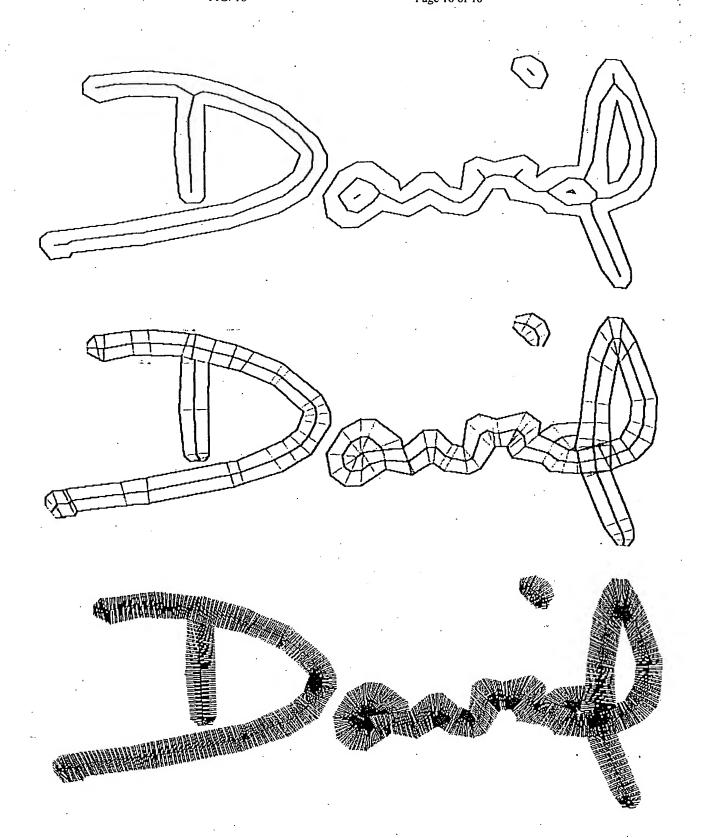


FIG. 16